QT SERIES OPEN FRAME POWER SUPPLIES - INSTRUCTION MANUAL

RATINGS

MODEL	OUTPUT VOLTAGE RANGE	MAXIMUM CURRENT (AMPS) AT AMBIENT TEMPERATURE			
		40°C.	50°C.	60°C.	71°C.
QT-1	(B1) 5 ± 5% (B2 & 3) ± 12 to ± 15 (dual tracking outputs)	3.0 0.5	2.5 0.45	2.0 0.4	1.5 0.35
QT-2	(B1) 5 ± 5% (B2 & 3) ± 12 to ± 15 (dual tracking outputs)	6.0 1.0	5.0 0.9	4.0 0.8	3.0 0.7
QT-3	(B1) 5 ± 5% (B2 & 3) ± 12 to ± 15 (dual tracking outputs)	9.0 1.0	7.5 0.9	6.0 0.8	4.5 0.7
QT-4	(B1) 5 ± 5% (B2 & 3) ± 12 to ± 15 (dual tracking outputs)	12.0 3.0	10.0 2.7	8.0 2.4	6.0 2.1

AC input is 105-125 or 210-250 volts AC 47-440 hz. Output current ratings apply for 57-63 hz input. For operation at 47-53 hz derate current 10% only when using 40°C. ratings.

SPECIFICATIONS - Line regulation is 0.10% for change from min. to max. Load regulation is 0.10% for change from min. to max. Ripple and noise is 1.5 mv rms, 5 mv peak to peak. Temperature coefficient is 0.03%/C. Remote resistance programming (5 volt only) is one to one voltage change with the programming supply capable of sinking 12 ma. The absolute difference between positive and negative output tracking (± 12 to ± 15 output) is 2%.

INSTALLATION - The supply should be mounted in ambients in accordance with ratings with unrestricted air movement in the neighborhood of the supply. The five allowable orientations consist of all possible arrangements with the exception of mounting with the two vent fins down. Three mounting surfaces are provided with appropriate holes. When the supply is mounted in the orientation with the flanged fins pointing upward, four spacers at least 5/8" long must be used. Chassis dimensions for QT Series units are as follows:

QT-1: 7" X 4 7/8" X 2 3/4" QT-2: 9" X 4 7/8" X 2 3/4"
QT-3: 11" X 4 7/8" X 2 3/4" QT-4: 16 3/4" X 4 7/8" X 4 1/8"

INPUT CONNECTIONS - 115 vac lines are connected to solder terminals 1 and 4 on the transformer with terminals 1 and 2 linked and also terminals 3 and 4 linked. 230 volt operation is as before except the only link required is between terminals 2 and 3. The high AC lead to the supply should be fused in accordance with the following ratings:

Model	115 Operation: Bussman Types	230 Operation: Bussman Types
QT-1	MDL-1	MDL-1/2
QT-2	MDL-2	MDL-1
QT-3	MDL 2 1/2	MDX 1 1/4
QT-4	MDX 5	MDA 2 1/2

OUTPUT CONNECTIONS - These are made on the barrier block, the outputs per table screened on the printed circuit board. Units are shipped set-up for local sensing and programming. For remote sensing on the 5 volt output, with diagonal cutters clip out under the board the local sensing links. For remote programming, clip the link only from S+ to B+. A ±5% voltage variation then is programmable by means of a re-

mote resistor connected between B+ and S+ at the rate of approximately 100 ohms per volt. In the case where remote sensing and remote control are desired, both links are removed and a remote resistor is connected from the positive junction of the load to the S+ terminal. In cases of remote sensing and/or remote control occasionally output oscillations will be noticed which can be suppressed by using a large electrolytic capacitor directly across the load at the actual sense points up to about 10,000 microfarads and/or high frequency capacitors up to a maximum of two microfarads between S- and B- and correspondingly between S+ and B+ at the barrier terminal block. In the case of remote sensing, the drops that can be accomodated must require voltage at the barrier block no greater than 5% above the nominal rated voltage of the supply.

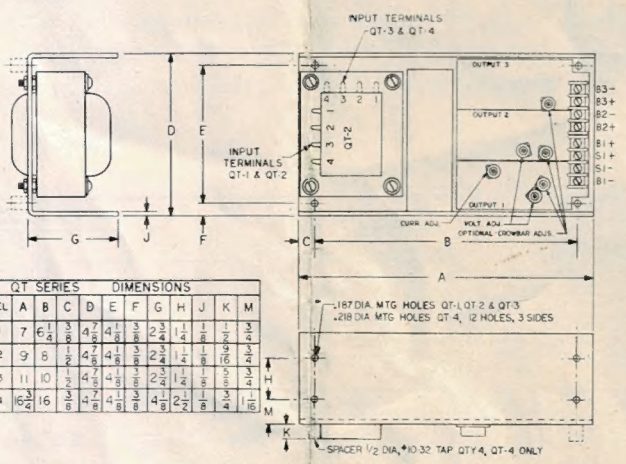
ADJUSTMENTS - The location of the voltage controls R112 for the 5 volt and R212 for the ±15 volt are identified on the P. C. board. The 5 volt current cutback limit adjustment R105 is also identified on the board. It is factory set, but can be adjusted from near 0 to slightly over 100% of rated load. If adjusted, care should be exercised to insure that max. current ratings are not exceeded. CAUTION: Improper adjustment of the current or voltage controls can cause damage and/or failure to the supply.

TROUBLE SHOOTING - Since most malfunctions are a result of semiconductor failure it is simplest to handle field problems by parts replacement. Ohmmeter checks are fully adequate for determining the integrity of series regulator transistors, driver transistors, rectifier diodes, and the like. The power regulator transistors, which are most likely to give trouble, are socketed for easy removal and replacement. Similarly, the integrated circuit regulator is socket mounted and easily replaceable. In each case, simply replace the defective component with a similar component having the same ratings. These can be determined by color codes on the components or by direct markings, depending upon the type of component. Contact factory sales engineer if for some reason the identification becomes obliterated or for replacement parts.

ACCESSORIES - C1 crowbar on 5 volt output only. C2 crowbars on ± 12 to ± 15 outputs only. C3 crowbars on all outputs. All crowbars are adjustable. Crowbars may be reset after triggering by deenergizing the primary power and then reenergizing it again. LBQ bracket to provide two or more mounting surfaces located at either one of the two open ends of the power supply. Mount the LBQ bracket to the desired end of the supply with the screws supplied.

WARRANTY - Deltron's standard one year warranty applies.

PROPRIETARY RIGHTS - Deltron's standard proprietary rights clause applies. See Deltron standard terms and conditions for full details on these items.



QT SERIES DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	J	K	M
QT-1	7	6 1/4	3/8	4 7/8	4 1/8	3/8	2 3/4	1 1/4	1/8	1/2	3/4
QT-2	9	8	1/2	4 7/8	4 1/8	3/8	2 3/4	1 1/4	1/8	9/16	3/4
QT-3	11	10	1/2	4 7/8	4 1/8	3/8	2 3/4	1 1/4	1/8	5/8	3/4
QT-4	16 3/4	16	3/8	4 7/8	4 1/8	3/8	4 1/8	2 1/2	1/8	3/4	1/16